

APPENDIX E

FIRING TABLES AND EXAMPLE SCORECARDS

This appendix provides firing tables for the subcaliber gunnery trainers discussed in this manual. It also includes an example of a completed scorecard for each light antiarmor weapon. All instructional and qualification firing tables are conducted on suitable ranges with ammunition designated in the firing tables. Some tables are fired in daylight, others in limited visibility, but all have some NBC firing (Table E-1).

M72-Series LAW	Instructional day fire, stationary targets
	Instructional day fire, moving targets
	Instructional night fire
M136 AT4	Instructional fire
	Instructional night fire
	Qualification fire
	Qualification night fire
	Advanced instructional fire

Table E-1. Firing tables for light antiarmor weapons.

E-1. M72-SERIES LAW

The M190 35-mm subcaliber device is used to fire the instructional firing tables for the M72-series LAW and DA Form 7323-R (M72-Series LAW Scorecard) is used to score them. Figure E-1 shows an example of the completed form. The instructional day and night firing tables for the LAW are provided in Tables E-2 and E-3.

NOTE: A blank copy of the form is located at the end of this publication for local reproduction on 8 1/2-inch by 11-inch paper.

M72-SERIES LAW SCORECARD

Instructions for using this form are provided in FM 23-25.
TRADOC is the proponent agency.

NAME THIELE, STEPHEN SSN 123-45-6789 DATE 19 APR 94
GRADE E-5 RATING 1st CLASS UNIT HHC 3/29 INF. REGT. WEATHER (circle one) CLEAR RAIN FOG SNOW

DATA REQUIRED BY THE PRIVACY ACT OF 1974

AUTHORITY: 10 USC 3012(g) / Executive Order 9397 PRINCIPAL PURPOSE(S): Record individual performance.
ROUTINE USES: Evaluate individual proficiency and determine proficiency level. SSN is used for positive identification purposes only. MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION: Voluntary. Individuals not providing information cannot be rated/scored on a mass basis.

TABLE	TYPE OF FIRE	TYPE OF TARGET	ROUND	RANGE (M)	FIRING POSITION	HIT	MISS
1	Instructional DAY	Stationary	1	125 to 150	Standing	✓	—
			2	150 to 175	Kneeling	✓	—
			* 3	150 to 200	Sitting	✓	—
			* 4	125 to 150	Prone	✓	—
Table Subtotals						4	0
FIRER'S SIGNATURE <u>Stephen Thiele</u>		DATE <u>19 APR 94</u>		SCORER'S SIGNATURE <u>Benny C. Williams</u>		DATE <u>19 APR 94</u>	
2	Instructional DAY	Moving	1	100 to 200	Standing	✓	—
			2	100 to 200	Sitting	✓	—
			* 3	100 to 200	Kneeling	—	✓
Table Subtotals						2	1
FIRER'S SIGNATURE <u>Stephen Thiele</u>		DATE <u>20 APR 94</u>		SCORER'S SIGNATURE <u>Benny C. Williams</u>		DATE <u>20 APR 94</u>	
3	Instructional NIGHT	Stationary	1	100 to 150	Kneeling	✓	✓
			2	100 to 150	Sitting	✓	—
			* 3	100 to 150	Sitting	✓	—
Table Subtotals						2	1
FIRER'S SIGNATURE <u>Stephen Thiele</u>		DATE <u>21 APR 94</u>		SCORER'S SIGNATURE <u>Benny C. Williams</u>		DATE <u>21 APR 94</u>	

* Firer must wear a protective mask when firing this round.

CONSOLIDATED SCORES

FIRER'S SIGNATURE Stephen Thiele DATE 21 APR 94 TOTAL MISSES 2
SCORER'S SIGNATURE Benny C. Williams DATE 21 APR 94 RANK SFC
RANGE OIC'S SIGNATURE Leary Anderson DATE 21 APR 94 RANK CPT

INSTRUCTOR NOTES

- ALL FIRING TABLES
- Do not announce the ranges to targets.
 - Fire all engagements in sequence.

DA Form 7323, JUL 94

Figure E-1. Example completed DA Form 7323-R.

TABLE 1 M72-Series LAW Instructional Day Fire, Stationary Targets	
TASK	Each soldier engages stationary armored targets with the M190 subcaliber device.
CONDITIONS	Given one M190 subcaliber device and four M73 rockets, on a suitable firing range with stationary targets at a range of 100 to 225 meters. Two targets are engaged in MOPP4.
STANDARD	The soldier fires four rockets at stationary targets and achieves at least three hits.
TABLE 2 M72-Series LAW Instructional Day Fire, Moving Targets	
TASK	Each soldier engages moving armored targets with the M190 subcaliber device.
CONDITIONS	Given one M190 subcaliber device, three M73 rockets, and targets moving at a rate of 8 to 24 kmph and at a range of 100 to 200 meters. Frontal and oblique-moving targets may be used when a manned, moving tank is available. One target is engaged in MOPP4.
STANDARD	The soldier fires three rockets at moving targets and achieves at least two hits.

Table E-2. Instructional day firing tables for the M72-series LAW.

TABLE 3 M72-Series LAW Instructional Night Firing	
Before you can use the AN/PVS-4, you must install an M72A1 sight reticle on it and Boresight it to an expended M72-series LAW launcher.	
TASK	Each soldier engages stationary targets at night with the M190 subcaliber device.
CONDITIONS	Given one M190 subcaliber device and three M73 rockets, on a suitable firing range with stationary targets at a range of 100 to 150 meters, at night, and either an AN/PVS-4 or illumination provided by indirect fire.
STANDARD	The soldier fires three rockets at stationary targets and achieves at least one hit. He engages one of these targets in MOPP4.

Table E-3. Instructional night firing table for the M72-series LAW.

E-2. M136 AT4

The M287 9-mm tracer bullet trainer is used to fire the instructional, qualification, and advanced instructional firing tables for the M136 AT4 and DA Form 7324-R (M136 AT4 Scorecard) is used to score them. A copy of this form is located at the end of this publication for local reproduction on 8 1/2-inch by 11-inch paper. Figure E-2 shows an example of the completed form; Tables E-4 through E-6, on pages E-7, E-8, and E-9, provide the instructional, qualification, and advanced instructional firing tables for the AT4. The latter must be fired on a separate, more specialized range.

E-3. NIGHT COURSE OF FIRE TABLES AND QUALIFICATION FOR M136 AT4

Each soldier is given a PMI before the instructional and qualification tables are fired. Once the soldier completes Table I and III (day tables), he is given additional instruction on the use of the aided vision devices for the night operations.

a. Qualification Tables for the M287 Tracer Trainer.

- Table I (Instructional Day). This scenario consists of 12 targets from 100 to 300 meters. The standard to proceed to the next table is 6 out of 12 targets successfully engaged.
- Table II (Instructional Night). This scenario consists of 8 targets from 100 to 300 meters. The standard to proceed to the next table is 6 out of 12 targets successfully engaged at night.
- Table III (Qualification Day). This scenario consists of 8 targets from 100 to 300 meters. The standard to proceed to the next table is 6 out of 8 targets successfully engaged.
- Table IV (Qualification Night). This scenario consists of 8 targets from 100 to 300 meters (same as Table III, but conducted at night). The standard to proceed to the advanced firing tables is 6 out of 8 targets successfully engaged.

NOTES: 1. In Table IV, eight engagements are proposed as opposed to the current six engagements.
2. All references to the M136 launcher and cartridge refer to the M287 9-mm tracer bullet training device.

b. Ammunition Requirements for Night Training Strategy. The current STRAC ammunition allocation and course of fire is compared with the proposed night training strategy in Table E-7 on page E-9. The current STRAC table stipulates that 120 rounds of 9-mm tracer ammunition is authorized to each squad for additional squad members to fire Tables I and IV.

c. Day Standards. Commanders are able to achieve the current day standard at night with the M136 AT4 through the use of training strategy within this field manual. A gunner who is qualified on the day standard and has executed preliminary marksmanship training with the appropriate night vision device can achieve the current day standard at night. During testing, gunners had no problem engaging targets out to 300 meters. Table E-8, on page E-9, shows the day standard and is also the proposed night standard.

M136 AT4 SCORECARD

Instructions for using this form are provided in FM 23-25.
TRADOC is the proponent agency.

NAME DINKENS, DAVID SSN 135-24-5678 DATE 19 APR 94

GRADE E-3 RATING _____ UNIT HHG 229 INF REGT. WEATHER (circle one) CLEAR RAIN FOG SNOW

DATA REQUIRED BY THE PRIVACY ACT OF 1974

AUTHORITY: 10 USC 3012(g) / Executive Order 9397. PRINCIPAL PURPOSE(S): Record individual performance.
ROUTINE USES: Evaluate individual proficiency and determine proficiency level. SSN is used for positive identification purposes only. MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION: Voluntary. Individuals not providing information cannot be rated/scored on a mass basis.

TABLE	TYPE OF FIRE	TYPE OF TARGET	ROUND	RANGE (M)	FIRING POSITION	HIT	MISS
1	Instructional Day	Stationary	1	150 to 200	Kneeling	✓	—
		Stationary	* 2	150 to 200	Kneeling	✓	—
		Stationary	3	250 to 300	Sitting	✓	—
		Stationary	4	250 to 300	Sitting	✓	—
		Stationary	5	125 to 150	Prone	✓	—
		Stationary	6	125 to 150	Prone	✓	—
		MMTT/MAS	7	150 to 200	Kneeling	✓	—
		MMTT/MAS	* 8	150 to 200	Kneeling	✓	—
		MMTT/MAS	9	200 to 250	Standing	—	✓
		MMTT/MAS	*10	200 to 250	Fighting position, unsupported	—	✓
		MMTT/MAS	11	250 to 300	Kneeling	✓	—
		MMTT/MAS	12	250 to 300	Kneeling	—	✓
Table Subtotals						9	3

FIRER'S SIGNATURE David Dinkens DATE 19 APR 94 SCORER'S SIGNATURE Don Sell DATE 19 APR 94

2	Instructional Night	Stationary	1	125 to 150	Prone	<u> </u>	<u>✓</u>
		Stationary	2	125 to 150	Prone	<u>✓</u>	<u> </u>
		Stationary	* 3	150 to 200	Sitting	<u>✓</u>	<u> </u>
		Stationary	4	150 to 200	Sitting	<u>✓</u>	<u> </u>
		Stationary	5	250 to 300	Kneeling	<u> </u>	<u>✓</u>
		Stationary	6	250 to 300	Kneeling	<u>✓</u>	<u> </u>
		MMTT/MAS	7	125 to 150	Standing	<u>✓</u>	<u> </u>
		MMTT/MAS	8	125 to 150	Standing	<u>✓</u>	<u> </u>
		MMTT/MAS	* 9	200 to 250	Kneeling	<u>✓</u>	<u> </u>
		MMTT/MAS	10	200 to 250	Kneeling	<u>✓</u>	<u> </u>
		MMTT/MAS	11	150 to 200	Standing	<u> </u>	<u>✓</u>
		MMTT/MAS	12	150 to 200	Fighting position, unsupported	<u>✓</u>	<u> </u>
Table Subtotals						<u>9</u>	<u>3</u>

FIRER'S SIGNATURE David Dinkens DATE 19 APR 94 SCORER'S SIGNATURE Don Sell DATE 19 APR 94

* Firer must wear a protective mask when firing this round.

INSTRUCTOR NOTES	
ALL FIRING TABLES	<ul style="list-style-type: none"> Do not announce the ranges to targets. Fire all engagements in sequence. Fire Table 1 before Table 3; fire Table 2 before Table 4.
FIRING TABLES 2 THROUGH 5	<ul style="list-style-type: none"> Ensure no one fires at front or rear of a manned moving tank target. Total hits and misses, and enter results in the consolidated scores block on the back of this scorecard.

DA Form 7324-R, JUL 94 (FRONT)

Figure E-2. Example completed DA Form 7324-R (front).

M136 AT4 SCORECARD							
TABLE	TYPE OF FIRE	TYPE OF TARGET	ROUND	RANGE (M)	FIRING POSITION	HIT	MISS
3	Qualification Day	Stationary	1	125 to 150	Standing	✓	—
		Stationary	2	150 to 200	Kneeling	✓	—
		Stationary	* 3	200 to 250	Sitting	✓	—
		Stationary	4	250 to 300	Sitting	✓	—
		MMTT/MAS	5	125 to 150	Kneeling	✓	—
		MMTT/MAS	6	150 to 200	Fighting position, unsupported	—	✓
		MMTT/MAS	* 7	200 to 250	Sitting	✓	—
		MMTT/MAS	8	250 to 300	Kneeling	✓	—
Table Subtotals						7	1
FIRER'S SIGNATURE <u>David Sinkens</u>		DATE <u>21 Apr 94</u>		SCORER'S SIGNATURE <u>Dan Sell</u>		DATE <u>21 Apr 94</u>	
4	Qualification Night	Stationary	* 1	125 to 150	Standing or Prone	✓	—
		Stationary	2	200 to 250	Kneeling	✓	—
		Stationary	3	250 to 300	Sitting	✓	—
		MMTT/MAS	4	150 to 200	Sitting	✓	—
		MMTT/MAS	* 5	125 to 150	Kneeling	—	✓
		MMTT/MAS	6	200 to 250	Fighting position, unsupported	✓	—
Table Subtotals						5	1
FIRER'S SIGNATURE <u>David Sinkens</u>		DATE <u>21 Apr 94</u>		SCORER'S SIGNATURE <u>Dan Sell</u>		DATE <u>21 Apr 94</u>	
5	Advanced Instructional	Sequence	1		Sitting	✓	—
		Sequence	2		Sitting	✓	—
		Pair	3		Kneeling	✓	—
		Pair	4		Kneeling	✓	—
		Volley	5		Kneeling	✓	—
		Volley	* 6		Sitting	✓	—
Table Subtotals						6	0
FIRER'S SIGNATURE <u>David Sinkens</u>		DATE <u>22 Apr 94</u>		SCORER'S SIGNATURE <u>Dan Sell</u>		DATE <u>22 Apr 94</u>	
<p>* Firer must wear a protective mask when firing this round.</p> <p>QUALIFICATION CRITERIA — BASED ON TOTAL HITS FOR TABLES 3 AND 4</p> <p>FIRST CLASS 13 HITS</p> <p><u>SECOND CLASS 11 HITS</u></p> <p>THIRD CLASS 9 HITS</p> <p>UNQUALIFIED FEWER THAN 9 HITS</p>							
CONSOLIDATED SCORES							
INSTRUCTIONAL TOTALS (TABLES 1 AND 2): HITS <u>10</u> MISSES <u>6</u> CLASS RATING, TABLES 1 AND 2: <u>FIRST</u>							
QUALIFICATION TOTALS (TABLES 3 AND 4): HITS <u>12</u> MISSES <u>2</u> OVERALL TOTALS HITS <u>30</u> MISSES <u>8</u>							
FIRER'S SIGNATURE <u>David Sinkens</u>		DATE <u>22 Apr 94</u>		SCORER'S SIGNATURE <u>Dan Sell</u>		DATE <u>22 Apr 94</u>	
RANGE OIC'S SIGNATURE <u>Randy C. Mott</u>		RANK <u>SFC</u>		DATE <u>22 Apr 94</u>			
DA Form 7324-R, JUL 94 (BACK)							

Figure E-2. Example completed DA Form 7324-R (back).

TABLE 1 M136 AT4 Instructional Fire	
TASK	Each soldier engages an armored target with the M287 tracer bullet trainer.
CONDITIONS	Given one M287 9-mm subcaliber device and twelve rounds of 9-mm tracer ammunition, a suitable firing range, stationary targets at a range of 100 to 300 meters, and other targets moving 8 to 24 kmph at a range of 150 to 200 meters. When a manned, moving tank is available, frontal and oblique-moving targets may be used.
STANDARD	The soldier fires twelve tracer bullets at stationary and moving targets. He engages three of these targets in MOPP4.
TABLE 3 M136 AT4 Instructional Fire	
TASK	Each soldier engages an armored target with the M287 tracer bullet trainer at night.
CONDITIONS	At night, given one M287 9-mm subcaliber device and twelve rounds of 9-mm tracer ammunition, artificial illumination, a suitable firing range, stationary targets at a range of 100 to 300 meters, and other targets moving from 8 to 24 kmph (5 to 15 mph) at a range of 150 to 200 meters. When a manned, moving tank is available, frontal and oblique-moving targets may be used.
STANDARD	The soldier fires twelve tracer bullets at stationary and moving targets. He engages two of these targets in MOPP4.

Table E-4. Instructional firing tables for the M136 AT4.

TABLE 2 M136 AT4 Qualification Fire	
TASK	Each soldier engages an armored target with the M287 tracer bullet trainer.
CONDITIONS	Given one M287 9-mm subcaliber device and eight rounds of 9-mm tracer ammunition, a suitable firing range, stationary targets at a range of 100 to 300 meters, and other targets moving at a rate of 8 to 24 kmph (5 to 15 mph) at a range of 150 to 200 meters. When a manned, moving tank is available, frontal and oblique-moving targets may be used.
STANDARD	The soldier fires eight tracer bullets at stationary and moving targets and achieves at least six hits. He engages two of these targets in MOPP4.
TABLE 4 M136 AT4 Qualification Fire	
TASK	Each soldier engages an armored target with the M287 tracer bullet trainer.
CONDITIONS	At night, given one M287 9-mm subcaliber device and six rounds of 9-mm tracer ammunition, artificial illumination, a suitable firing range, stationary targets at a range of 100 to 300 meters, and other targets moving 8 to 24 kmph (5 to 15 mph) at a range of 150 to 200 meters. When a manned, moving tank is available, frontal and oblique-moving targets may be used.
STANDARD	At night, given one M287 9-mm subcaliber device and six rounds of 9-mm tracer ammunition, artificial illumination, a suitable firing range, stationary targets at a range of 100 to 300 meters, and other targets moving 8 to 24 kmph (5 to 15 mph) at a range of 150 to 200 meters. When a manned, moving tank is available, frontal and oblique-moving targets may be used.

Table E-5. Qualification firing tables for the M136 AT4.

TABLE 5 M136 AT4 Advanced Instructional Fire	
Fire this table on an appropriate separate, specialized range.	
TASK	Each soldier engages an armored target with the M287 tracer bullet trainer.
CONDITIONS	Given one M287 9-mm subcaliber device and six rounds of 9-mm tracer ammunition, a suitable firing range, stationary targets at a range of 100 to 300 meters, and other targets moving 8 to 24 kmph (5 to 15 mph) at a range of 150 to 200 meters. When a manned, moving tank is available, frontal and oblique-moving targets may be used.
STANDARD	The soldier must fire six tracer bullets at stationary and moving targets and achieve at least three hits. He must engage two of the targets with sequence firing, two with pair firing, and two with volley firing, and he must observe MOPP4 while engaging one of the six.

Table E-6. Advanced instructional firing table for the M136 AT4.

EVENT	CURRENT STRAC	RECOMMENDED CHANGES	TOTAL
TABLE I	12	0	12
TABLE II	12	0	12
TABLE III (QUALIFICATION)	8	0	8
TABLE IV (NIGHT QUALIFICATION)	6	2	8
TABLE V (ADVANCE)	6	0	0
TOTAL	44	2	40

Table E-7. Ammunition requirements for night training strategy.

M136 AT4 (M287 TRAINER) TABLE III/IV			
ENGAGEMENT	RANGE	POSITION	HIT/MISS
1	125 to 150	Standing	
2	150 to 200	Kneeling	
3	200 to 250	Sitting	
4	250 to 300	Sitting	
5	125 to 150	Kneeling	
6	150 to 200	Fighting Position	
7	200 to 250	Sitting	
8	250 to 300	Kneeling	

Table E-8. M136 AT4 (M287 trainer) Table III/IV.